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10/662,236	09/15/2003	Hubert Laurenz Naimer	UNI1773-009	2419

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EXAMINER

LIEU, JULIE BICHNGOC

ART UNIT PAPER NUMBER

2636

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/662,236

Applicant(s)

NAIMER ET AL.

Examiner

Julie Lieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/15/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either on an application data sheet or supplemental oath or declaration.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-12 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worden et al. (US Patent No. 5,250,947).

Claim 1:

Worden et al. (Worden) discloses an electronic display showing a graphic indicator of ANP/RNP information for RNAV environments and precision approaches for an aircraft, wherein said display comprises:

- a. a RNP symbol, 32
- b. an ANP symbol 24; and
- c. a Course symbol, 26
- d. wherein said RNP symbol is fixed in size to represent the RNP requirements for said aircraft and a flight condition; and
- e. wherein said Course symbol and said ANP symbol move up or down with the vertical displacement of said aircraft.

Though the Course symbol move up or down with respect to the altitude placement instead of left or right with respect to the lateral displacement, it would have been obvious to one skilled in the art that the symbols in Worden could be used to depict other RNP parameters which are best described in lateral displacement because the function of the symbols would still be the same except for their orientation.

Claim 2:

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Worden shows a numeric value of RNP 34.

Claim 3:

Worden's display additionally comprises a numeric value of ANP, 24.

Claim 4:

The RNP symbol 32 is comprised of a center equivalent to a hollow shape in the center of the RNP symbol 32 matching a shape of said Course symbol 26.

Claim 5:

The electronic display of claim 4, wherein the shape of said Course symbol fits inside said hollow shape of said RNP symbol when the course of said aircraft matches the centerline of the RNP course requirements for said aircraft and said flight condition.

Claim 6:

The hollow shape of RNP symbol 32 and the shape of the Course symbol 26 are inverted chevrons.

Claim 7:

The ANP symbol 24 is similar to a rectangular shape.

Claim 8:

The shape of said ANP symbol 24 is partly contained within the shape of said RNP symbol 32.

Claim 9:

Worden fails to disclose enlarging the ANP symbol 24 to indicate increasing deviation of ANP from the RNP for the aircraft. However, lacking any criticality as to why it symbol must be enlarge, how it would produce any unexpected result, or what stated problem can be solved, it

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appears that Worden indication method for indicating the deviation of ANP from the RNP is functionally equivalent to enlarging the symbol. That is, the Course symbol 26 shows how much the deviation is as shown in figs. 4A-D.

Claim 10:

In Worden a change in depiction of the ANP symbol 24 is triggered when the ANP of said aircraft exceeds said RNP for the aircraft. That is, its position is changed with respect to tape 22.

Claim 11:

The size of said ANP symbol 24 appears to be limited to the size of the shape of the RNP symbol 32 and wherein depiction of said ANP symbol changes when said ANP of said aircraft exceeds the RNP for said aircraft.

Claim 12:

The size of said ANP symbol 24 is limited to the size of said shape of said RNP symbol 32. Worden fails to disclose enlarging the ANP symbol 24 to indicate increasing deviation of ANP from the RNP for the aircraft. However, lacking any criticality as to why it symbol must be enlarge, how it would produce any unexpected result, or what stated problem can be solved, it appears that Worden indication method for indicating the deviation of ANP from the RNP is functionally equivalent to enlarging the symbol. That is, the Course symbol 26 shows how much the deviation is as shown in figs. 4A-D.

Claim 15:

The ANP and Course symbols indicate the coupled status of the flight director in Worden's.

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Claims 16 and 17:

Worden et al. (Worden) discloses an electronic display showing a graphic indicator of ANP/RNP information for RNAV environments and precision approaches for an aircraft, wherein the display comprises:

- a. a RNP symbol, 32
- b. an ANP symbol 24
- c. a Course symbol, 26
- d. wherein said RNP symbol represents the RNP requirements for the aircraft and a flight condition
- e. wherein said ANP symbol represents the actual navigation performance of the aircraft
- f. wherein said Course symbol and said ANP symbol move up or down with the vertical displacement of said aircraft.

Though the Course symbol and ANP symbol move up or down with respect to the altitude placement instead of left or right with respect to the lateral displacement, it would have been obvious to one skilled in the art that the symbols in Worden could be used to depict other RNP parameters which are best described in lateral displacement because the function of the symbols would still be the same except for their orientation.

Claim 18:

Worden shows a numeric value of RNP 34.

Claim 19:

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The RNP symbol 32 is comprised of a center equivalent to a hollow shape in the center of the RNP symbol 32 matching a shape of said Course symbol 26.

Claim 20:

Worden fails to disclose enlarging the ANP symbol 24 to indicate increasing deviation of ANP from the RNP for the aircraft. However, lacking any criticality as to why it symbol must be enlarge, how it would produce any unexpected result, or what stated problem can be solved, it appears that Worden indication method for indicating the deviation of ANP from the RNP is functionally equivalent to enlarging the symbol. That is, the Course symbol 26 shows how much the deviation is as shown in figs. 4A-D.

5. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worden et al. (US Patent No. 5,250,947) in view of Carriker et al. (US patent No. 6,571,155).

Claims 13-14:

The colors of the symbols in Worden are not discussed. However, the use of different colors to depict different status or conditions of ANP and RNP is conventional in the art as taught in Carriker et al., col. 14, first paragraph wherein a cautionary color such as yellow is used (changed from white) to call the operation attention of an undesired condition. In light of this teaching it would have been obvious to one skilled in the art to apply this teaching in the Worden system because it is conventional and effective in attracting attention an operator.



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***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Selk, II et al, US 2004/1089492, discloses a graphical display for aircraft navigation.

Balding, US Patent No. 3,643,258, discloses an electronic generator for contact and analog and command information.

Verbaarschot et al., US Patent No. 5,185,606, discloses a flight display and collision avoidance system.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 571-272-2978. The examiner can normally be reached on Mon-Fri 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Julie Lieu  
Primary Examiner  
Art Unit 2636

Jan. 23, 05